

The Relationship Between Adolescent Marijuana Use and Impulsivity: A Meta-Analytic Review

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Objective: Sensation seeking, a component of impulsivity, has been studied extensively as a personality predictor of marijuana-related behaviors. Other traits of impulsivity have been examined sporadically; however, to date, no review has synthesized the research of this multidimensional trait. The present study reviewed existent literature to examine (1) how separable impulsive personality traits relate to marijuana use and to marijuana use consequences and (2) how these relationships might differ across gender and race. **Method:** 46 total studies (51 independent samples) were analyzed using a random effects model to examine the relationship between individual impulsive personality traits and marijuana use and consequences. **Results:** Impulsivity had a small but significant association with marijuana-related behaviors ($r = 0.22$, $p < 0.01$). Relationships were more robust for marijuana use consequences than marijuana use ($Q_{\text{between}} = 9.60$, $p < 0.01$). Importantly, facets of impulsivity such as lack of planning, negative urgency, and positive urgency, had similar relationships with marijuana use ($r_{\text{pl}} = 0.13$, $p < 0.01$; $r_{\text{nur}} = 0.23$, $p < 0.01$; $r_{\text{pur}} = 0.19$, $p < 0.01$) and marijuana use consequences ($r_{\text{pl}} = 0.47$, $p < 0.01$; $r_{\text{nur}} = 0.26$, $p = 0.22$; $r_{\text{pur}} = 0.37$, $p < 0.01$) as sensation seeking ($r_{\text{ss}} = 0.22$, $p < 0.01$ and $r_{\text{ss}} = 0.39$, $p < 0.01$, respectively). While non-significant, there was a large effect for gender ($\beta = -0.26$, $p = 0.12$) and a medium effect for race ($\beta = 0.38$, $p = 0.40$) in moderating the relationship between impulsivity and marijuana consequences, such that samples with more Whites and more males had trends towards more robust effect sizes. **Discussion:** Impulsivity has a robust association with marijuana-related consequences than with marijuana use. Multiple facets of impulsivity were related to marijuana use and its consequences. Research and intervention should consider targeting multiple impulsivity traits to reduce the harmful consequences associated with adolescent marijuana use. Such initiatives should also consider gender and race differences in the impulsivity-marijuana use relationship.